IN THE CLAIMS:

1. (Original) A method of imaging portions of a workpiece located within a field of view of an imaging system, the workpiece having features which are to be detected with the imaging system, the method comprising:

illuminating a first portion of the workpiece from a first combination of illumination positions and reduced illumination positions so as to limit a first distribution of energy reflected specularly from a workpiece location corresponding to the first portion;

generating output signals to produce image data representative of an image of the first portion;

illuminating a second portion of the workpiece from a second combination of illumination positions and reduced illumination positions so as to limit a second distribution of energy reflected specularly from a workpiece location corresponding to the second portion, the second combination being non-identical to the first combination as a result of a position of the workpiece portion within the field of view of the imaging system;

generating output signals to produce image data representative of an image of the second portion; and

detecting the features in images of the first and second image portions based on similarities and differences in the images.

2. (Original) The method of claim 1 wherein illuminating the first portion and illuminating the second portion are carried out concurrently.

3. (Original) The method of claim 1 further wherein the surface features are machine readable marks.

4. (Original) The method of claim 1 further comprising controllably positioning the field of view of the imaging system after illuminating the first portion so as to view the second portion with the imaging system.

5. (Original) The method of claim 4 wherein controllably positioning is carried out with a computer-controlled galvanometer-mounted pivotal mirror having a maximum deflection angle, wherein a maximum field of view of the imaging system is limited by the mirror deflection angle.

6. (Original) The method of claim 3 further comprising moving the workpiece relative to the imaging system after illuminating the first portion so as to view the second portion with the imaging system.

7. (Original) The method of claim 6 wherein moving is carried out with an X-Y stage.

8. (Original) The method of claim 1 wherein the features are marks on a semiconductor wafer.

9. (Original) The method of claim 1 wherein the features are laser scribed marks on the workpiece, detecting is carried out with by means of a machine vision processor, and wherein illuminating the first and second combinations of illumination positions and reduced illumination positions introduces sufficient contrast between the features and a background to detect the features at any angular location within a field of view of the imaging system.

10. (Original) The method of claim 1 further including irradiating the workpiece with a laser beam to modify a workpiece surface property wherein a feature is produced by interaction of the laser beam and the workpiece.

11. (Currently Amended) A method of imaging portions of a workpiece comprising:

illuminating the workpiece with energy from ~~an~~ a plurality of illumination ~~position~~ positions so as to produce reflected energy from at least first and second portions of the workpiece;

attenuating, at a first location between an illumination position and an image location corresponding to a first portion of the workpiece, at least a ~~first~~ portion of the ~~reflected~~ energy from the illumination position so as to limit the distribution of ~~reflected~~ energy ~~incident on an~~ reflected from the image location corresponding to ~~a~~ the first workpiece portion ~~of the workpiece~~;

generating output signals to produce image data representative of an image of the first workpiece portion;

attenuating, at a second location between an illumination position and an image location corresponding to a second portion of the workpiece, at least a ~~second~~ portion of the ~~reflected~~ energy from the illumination position so as to limit the distribution of ~~reflected~~ energy ~~incident on an~~ reflected from the image location corresponding to ~~a~~ the second workpiece portion ~~of the workpiece~~;

generating output signals to produce image data representative of an image of the second workpiece portion; and

detecting ~~the~~ features in the images of the first and second ~~image~~ workpiece portions based on similarities and differences in the images.

12. (Currently Amended) The method of claim 11 wherein the attenuating ~~the first and second portions is~~ steps are carried out concurrently.

13. (Original) The method of claim 11 further comprising irradiating the workpiece with a laser beam to modify a workpiece surface property wherein a surface feature is produced by interaction of the laser beam with the workpiece.

14. (Original) The method of claim 11 wherein attenuating comprises controllably positioning at least one baffle in a path between an illumination position and an image location.